

REMARKS

The claims have been amended so as to take care of the formal objection raised by the Examiner, and also to emphasize the patentable of the present invention.

Reconsideration is accordingly respectfully requested of rejection of the claims as anticipated by or unpatentable over the references mentioned in the Official Action at the middle of Page 3 thereof.

U. S. 4,929,388 (Wessling) discloses electrically semiconductive thermoplastic polymer blends. Wessling does not teach to select components of the blends on the grounds of their surface tension but on the grounds of the difference in surface tension between a polymer component and electrically conductive carbon black. Additionally, carbon black is the only electrically conductive substance disclosed by Wessling. There is no teaching of an electrically conductive filler containing metal.

U. S. 5,225,471 (Tajima et al.) discloses thermoplastic resin compositions comprising two resin phases; i.e., matrix phase and additive phase, and a filler material. The filler material can be electrically conductive metallic oxide. According to column 2, lines 26-47, the surface tension of the matrix has to be lower than the surface tension of the additive, and the surface tension of the filler has to be the highest.

This is quite the contrary compared to claim 3. It is also clear that Tajima et al. do not disclose compositions where the non-dispersing phase, i.e. matrix, comprises PMMA, POM, LCP, or SAN.

U. S. 5,213,736 (Sumita et al.) do not disclose or hint that components of the blends could be selected on the grounds of their surface tension, not to mention that the difference in surface tension should be at least 2 mN/m.

U. S. 6,638,448 (Karttunen et al.) discloses two incompatible polymers and nickel, but does not teach that the components of the blends should be selected on the ground of their surface tension, nor that the difference in surface tension should be at least 2 mN/m.

U. S. 6,197,219 (Foulger) discloses a conductive polymer composite material comprising a minor phase material of semicrystalline polymer, a major phase material of another polymer, and filler material dispersed in the minor phase material. The minor phase and the major phase are selected on the grounds of their solubility parameters. Foulger does not teach that components of the blends could be selected on the grounds of their surface tension.

U. S. 6,331,586 (Thielen et al.) discloses electrically conductive polymer blends comprising at least two immiscible polymers such that each polymer forms a respective continuous phase. The polymers are chosen such that the polymers should be at least partly immiscible and preferably differ in polarity.

Nevertheless, Thielen et al. do not disclose the use of the difference in surface tension of the polymeric materials to measure the suitability of materials to be blended. Surface tension is a sum of polarity and dispersion factor. Thielen et al. are totally silent-about dispersion factor and thus the importance of the surface tension on the selection of polymeric materials.

An English translation of the abstract of JP 59-223313 discloses a method for manufacturing synthetic fibers by using a solution containing acrylic polymer mixed with conductive particles, and polyurethane polymer. The only information concerning the selection of the polymers is that they should be miscible but incompatible with each other. The abstract does not teach or hint at that components of the blends could be selected on the grounds of their surface tension.

Reconsideration is also respectfully requested, for the rejection of the claims on the ground of double patenting with the U. S. patent 6,638,448. This patent claims electrically conductive thermoplastic elastomers that comprise broadly only one polymer phase having viscosity below a given viscosity curve. By contrast, the claims in the present application recite polymer blends have at least two polymer phases in its structure, the polymers being selected on the basis of surface tension. Thus, the invention recited in the present claims is separate and distinct from that claimed in the earlier patent.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Robert J. Patch', written over a horizontal line.

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